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Remarks

This communication is considered fully responsive to the non-final Office Action mailed April 16, 2007. Claims 12-19 were previously withdrawn. Claims 1-11, 20-22, and 24-26 were examined. Claims 1-11, 20-22, and 24-26 stand rejected. No claims are amended. No claims are canceled. No new claims have been added. Reexamination and reconsideration of claims 1-11, 20-22, and 24-26 are respectfully requested.

Claim Rejections - 35 U.S.C. 103(a)

The Office Action rejected claims 4 and 11 under 35 U.S.C. 103(a) as being unpatentable over (U.S. Patent Application Publication No. 2002/0189545 to Matsumura, et al. ("Matsumura") in view of U.S. Patent No. 6,806,149 to Bu, et al. ("Bu") and the article entitled "Coverage Properties of Silicon Nitride film prepared by the Cat-CVD method" to Osono, et al. (Osono). Applicant respectfully traverses this rejection. Claim 1 positively recites "supplying silane, ammonia, and hydrogen gases to the heating member." Matsumura fails to disclose at least these recitations.

The Office Action states that the "Examiner's indication of allowability of claims 23 and 27 was based on Applicant's argument that the aforementioned article [Osono] provided much lower step coverage in a similar process, and therefore the limitation of '100% step coverage' was unobvious. However, upon careful review, the Examiner notes that the lower step coverage percentages pertain to a catalyst based CVD process, which is different than the claimed thermal CVD process. . . . The Examiner also notes values of about 90% coverage for thermal CVD processes are disclosed [in Osono]."

Although Osono does state that over 90% coverage was obtained for thermal CVD, the Examiner erred in characterizing Applicant's claimed process as a thermal CVD process. Applicant recites "heating a substrate to be subjected to film formation to a substrate temperature [and] heating a wire to a wire temperature." These steps are consistent with cat-CVD (also referred to as "hot-wire" CVD), not a thermal CVD process.

For at least the foregoing reasons claims 1 and 5 are believed to be allowable and Applicant respectfully requests withdrawal of the rejection of claims 1 and 5.

Furthermore, thermal CVD processes are typically carried out at much higher temperatures (e.g., Osono discloses thermal CVD at 750°C). Claim 2 recites "the substrate temperature is in the range of about 200 - 400°C." Claim 9 makes similar recitations. This temperature range is consistent with the cat CVD processes disclosed in Osono, for which very low step coverage was obtained (e.g., about 33% at a substrate temperature of 300°C. See, e.g., Section 3.2, page 167, in Osono. Osono does not disclose obtaining about 100% step coverage with a cat or "hot-wire" CVD process. The remaining claims depend from either claim 1 or claim 5, which are believed to be allowable. Therefore, all of the remaining claims are also believed to be allowable for at least the same reasons.

Reexamination and reconsideration of the currently pending claims are respectfully requested.

Applicant does not make any admissions as to the propriety of the rejections, and Applicant hereby expressly reserves the right to further traverse the rejection if maintained in a subsequent Office Action.

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Conclusion

The Applicant respectfully requests that a timely Notice of Allowance be issued in this matter. If there are any matters that may be clarified by telephone, the examiner is urged to contact Applicant's attorney at the telephone number listed below.

Respectfully Submitted,

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